AD			
_	 	 	

Award Number: DAMD17-01-1-0578

TITLE: Breast Cancer Susceptibility and DNA Damage/Repair

PRINCIPAL INVESTIGATOR: Roy E. Shore, Ph.D.

CONTRACTING ORGANIZATION: New York University School of Medicine

New York, New York 10016

REPORT DATE: June 2002

TYPE OF REPORT: Annual

PREPARED FOR: U.S. Army Medical Research and Materiel Command

Fort Detrick, Maryland 21702-5012

DISTRIBUTION STATEMENT: Approved for Public Release;

Distribution Unlimited

The views, opinions and/or findings contained in this report are those of the author(s) and should not be construed as an official Department of the Army position, policy or decision unless so designated by other documentation.

Form Approved

REPORT DOCUMENTATION PAGE

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing this collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503

1. AGENCY USE ONLY (Leave blank	2. REPORT DATE	3. REPORT TYPE AND	DATES COVERE	D
	June 2002	Annual (1 Jun		
4. TITLE AND SUBTITLE			5. FUNDING N	UMBERS
Breast Cancer Susce	eptibility and DNA		DAMD17-0	1-1-0578
Damage/Repair				
6. AUTHOR(S) :				
Roy E. Shore, Ph.D.				
Roy E. Bhore, Fir.D.				
Email: roy.shore@med.nyu	.eđu			
7. PERFORMING ORGANIZATION N	AME(S) AND ADDRESS(ES)		8. PERFORMIN	G ORGANIZATION
None Westler To 1			REPORT NU	MBER
New York University		e		
New York, New York	10016			
•				
9 SPONSORING / MONITORING	OFNOV NAME (O) AND ADDRESS OF			
9. SPONSORING / MONITORING A	5)	10. SPONSORING / MONITORING		
U.S. Army Medical Research and	Materiel Command		AGENCY F	EPORT NUMBER
Fort Detrick, Maryland 21702-50	112			
	,12			
11. SUPPLEMENTARY NOTES				
				·
12a. DISTRIBUTION / AVAILABILIT				12b. DISTRIBUTION CODE
Approved for Public Re	lease; Distribution Unl	imited		
	•			
40 45075407				
13. ABSTRACT (Maximum 200 Wo	rds)			
none provided				
lione provided				
		•		
14 CUBICOT TENTO				
14. SUBJECT TERMS				15. NUMBER OF PAGES
breast cancer				4
				16. PRICE CODE
17. SECURITY CLASSIFICATION	18. SECURITY CLASSIFICATION	19. SECURITY CLASSIF	ICATION	20. LIMITATION OF ABSTRACT
OF REPORT	OF THIS PAGE	OF ABSTRACT		AMITATION OF ADSTRACT
Unclassified	Unclassified Unclassified Unclassif		ied	Unlimited

Table of Contents

SF 298	***************************************	 2
Sable of Contents		 3
Body		

Progress Report, May 2001 – May 2002 "Breast Cancer Susceptibility and DNA Damage/Repair"

U.S. Department of the Army Grant # DAMD17-01-1-0578

The study is based on breast cancer cases and matched controls from a cohort of women (New York University Women's Health Study—NYUWHS) who have been followed up for 7-13 years since they donated a blood sample and completed a health, lifestyle and dietary questionnaire to determine the incidence of breast cancer. The original proposal was to genotype 6 polymorphisms in the genetic pathways for DNA repair or protection against DNA damage in 200 cases and 200 matched controls.

We expanded the study to 300 cases and 300 controls. For about 40% of subjects we had blood clots or cell aggregates (left after separating out the serum) from which to extract DNA, but for the remainder we had to extract it from the serum. There was abundant DNA in the clots and cell aggregates but much less in the serum.

Before genotyping a locus we conducted a quality control/validity check. This included performing analyses on two samples from each of about 70 women. We concentrated on the adequacy of the DNA samples from serum because of concerns about the amount and integrity of the DNA in serum and therefore ran 50 pairs comparing a serum and clot sample. For one locus we found that we had to adjust the conditions of the PCR and hybridization for the serum-based DNA in order to get good agreement with the corresponding clot-based DNA. Had we not run this comparison, we would not have known that the serum-based DNA was giving us inaccurate readings based on our initial optimization.

We have completed the genotyping of three of the proposed loci (XPD, XRCC1 and MnSod) and are in the midst of analyzing those data.

We have requested an unfunded extension of the study for another year (until June 30, 2003). The other three loci will be completed and the results written up during that time period.

Signed

Roy E. Shore, PhD, DrPH